

SPACE CENTER

Roundup

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Gearing up

NASA JSC 2001e02168

STS-110 mission specialist Astronaut Lee M. E. Morin trains for the upcoming April mission, which is scheduled for no earlier than April 4. He is pictured here wearing a training version of the full-pressure launch and entry suit. Atlantis' mission will be one of the most complex station assembly flights to date, including four space walks and operations with both the shuttle's and the station's robotic arms.

EOPO: Making progress for you

By Estella Hernandez Gillette



The JSC Equal Opportunity Programs Office (EOPO) has gone through many changes since it was established in 1972 when Affirmative Action was extended to the Federal sector.

Our team is comprised of five civil servants, one detailee from Alabama A&M University and one Office Education student. We have oversight of two major groups of JSC employee groups who help us carry out our mission: The JSC Diversity Council and the JSC EO Counselors.

We are the responsible organization for oversight of the affirmative employment regulations and

policies. JSC has invested heavily in diversifying its work force throughout the years - it now consists of approximately 52 percent white males and 48 percent minorities and women. Progress has been made but certainly there's much more to do!

What we do for JSC

We transformed our previously multiple, weeklong cultural observances into American Heritage Week, a week to celebrate the rich heritage that we all bring to our U. S. space mission.

This year, we want to try something new for American Heritage Week and we are seeking your input. How about a celebration of our "American Heroes," which are those members of the JSC work force and/or their children who have served or are serving in defense of our American freedom? What better proof that we all have common objectives, but maybe from different perspectives? Call us at x30601 or email paula.n.scheffman1@jsc.nasa.gov to offer your suggestions.

We also continue to celebrate our special emphasis observances. Employees have been entertained by many different performers and for this year's observances, we'll be sponsoring different exhibits to make all of us more aware of the contributions of each group, including contributions to NASA's goals and objectives.

In the area of discrimination complaints, we have taken a very proactive approach to resolve issues, including extensive training of the Equal Opportunity staff and the JSC EO Counselors, as well as the establishment of a JSC mediation team to further help resolve issues. We have successfully resolved issues because we have involved all necessary levels of the aggrieved employee's organization to help resolve the issue. Our goal is to return employees to their productive environment - we all want solid careers and a stable future in our professions.

In the area of education and outreach, we have programmed millions of dollars through the Minority University Research and Education Program (MUREP) to assure a future work force that can do our NASA work and continue to keep our country in the forefront of technology. We identified our growing minority workforce as a business concern a long time ago, even before the word "outreach" became popular!

Our academic partners are doing research that is relevant to the NASA mission with funding from the MUREP. We are currently preparing for the arrival of about 40 students from historically Black universities and colleges, Hispanic-serving institutions and Tribal colleges, as well as college- and high school-level students with disabilities. Our goal is for those students to gain positive experiences in their JSC internships so that they will return to us as full-time employees upon graduation.

Cooperation and coordination with the various JSC Directorates is paramount. We couldn't plan our different activities without the help of our JSC workforce, nor resolve issues without the involvement of our JSC employees and management. And, we couldn't place our summer interns without the cooperation and support of our JSC mentors.

We work very closely with management, the Human Resources Office, the Legal Office, the Public Affairs Office and the American Federation of Government Employees to make sure that we do the most we can to afford all of our employees opportunities to succeed.

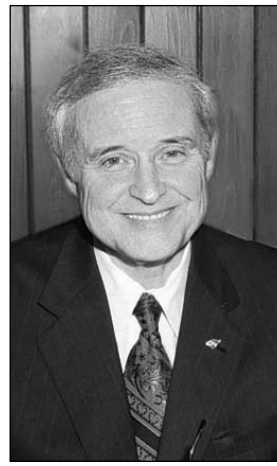
However, the road to success is multi-faceted. It doesn't just take the organization or the EOPO or management to help an individual succeed. JSC has many opportunities for development, visibility and for individuals to gain practice that will help them achieve their next level of success.

It's not only hard work that helps us to succeed - it's also attitude and the ability to step out of our comfort zone. JSC is filled with talented, qualified individuals who work in a competitive environment, but there is so much our system has to offer!

We have a formal Mentoring Program now, one that everyone can sign up for as either a mentor or protégé. We have a formal Leadership Development Program to assure that we get the proper development to be the leaders of the future. Finally, we have new leadership - a fresh start for all of us.

We all have a common goal: The success of our Center and our Agency. Our leaders have the responsibility to provide us with the vision, but we have equal responsibility to be ready and willing to tackle the challenges that they set before us. From those challenges will come many opportunities. Prepare yourself for

FROM THE DESK OF ROY S. ESTESS



Recently, Estella Gillette and her Equal Opportunity Program Office staff hosted the Agency's Equal Opportunity (EO) Board meeting here at JSC. The EO Board is comprised of Agency Deputy Associate and Assistant Administrators, Deputy Center Directors and EO Directors.

We were very pleased that Administrator Sean O'Keefe wanted to transmit a live message to this group. I think it valuable and pertinent to pass on what he had to say about diversity.

He said, "The objectives of diversity should be to resolve the way we do things. It should not be a pursuit in or of itself for reporting purposes only. The only way to avoid 'the group thing' is to be proactive by emphasizing diversity throughout whatever agenda we pursue. It's an opportunity to look at problems differently, not just by academic discipline, but also by the diversity of thought."

I agree with him, but more importantly, I have observed this in practice here at JSC. A few years ago, JSC examined its philosophy and determined that it was time to better match the current JSC environment. That process led to discontinuing the committees for the different cultural groups, in existence for 20 years, and instead the JSC Diversity Council (DC) was formed. The DC represents all of the JSC community and works together to understand the issues existing within our work force and to bring those issues to senior management through the JSC Evolution Team (JET).

The JET, was formed to involve senior management in addressing the issues once they were identified. Through focus-group interviews, we identified a set of leading concerns that included:

- ❖ Lack of defined vision for the Agency and the Center
- ❖ Limited career tracks for some of the work force
- ❖ Lack of a formal mentoring process
- ❖ Balancing family concerns with work demands
- ❖ The development of strong future leaders who would lead us through the challenges we are facing as a Center and Agency.

These are all areas that the Center is in the process of remedying - witness the many programs that HR is fielding and that were highlighted in the January issue of the *Roundup*.

Are we satisfied with our gain? Pleased, but not nearly satisfied. I don't think we can afford to rest on our laurels, as there remains much work to do. However, I am proud of the progress that JSC has made through the years in expanding its understanding and appreciation of the positive impact a diverse work force delivers to the rich contributions JSC makes to the country.

I applaud your efforts in this arena and encourage you to continue to foster diversity in our attitudes and work relationships. By attaining a diverse outlook within our environment and workforce we strengthen the threads that tie together our common goals and objectives.

Roy S. Estess

HOWELL NAMED JSC DIRECTOR

The yearlong wait is over. **Jefferson Davis Howell, Jr.**, has been named Director of the Johnson Space Center effective April 1.

Howell is no stranger to JSC. He currently serves as Senior Vice President and Program Manager for the Safety, Reliability and Quality Assurance contract at JSC. The contract focuses on safety and mission assurance for the Space Shuttle and International Space Station programs. He is employed by Science Applications International Corporation (SAIC).

A retired U.S. Marine Corps Lieutenant General, Howell is only the eighth person to serve as Director in the center's 40-year history. In the April issue of the *Roundup*, we will have more extensive coverage of JSC's new Center Director. We will also provide a look back at Roy Estess' year of leadership. Until then, for additional information on Howell, please visit the JSC homepage at: www.jsc.nasa.gov.

STS-110: A framework for station expansion

The Space Shuttle *Atlantis* will begin expanding the International Space Station on STS-110, installing the initial section of a framework that eventually will hold systems needed to provide power and cooling for future international research laboratories.

Scheduled to launch no earlier than April 4, *Atlantis*' mission will be one of the most complex station assembly flights to date, including four space walks and operations with both the shuttle's robotic arm and the station's robotic arm. During the space walks, astronauts will truly take on the appearance of high-rise construction workers as they assemble beams, attach work lights, bolt girders and plug in electrical connections.

For the first time, the station's Canadarm2 robotic arm will be used exclusively to hoist the 13-ton truss section, called the S0 Integrated Truss Structure, from *Atlantis* and attach it to the station. Other firsts also will be apparent: The first use of the station arm as a space "cherry picker" to maneuver space walkers and the first shuttle flight to have all space walks originate from the station's airlock.

The *Atlantis* crew will be comprised of:

Commander

Michael J. Bloomfield, 43, Lt. Col., USN – Third space flight

Pilot

Stephen N. Frick, 37, Lt. Cmdr., USN – First space flight

Mission Specialist 1

Rex J. Walheim, 39, Lt. Col., USAF – First space flight

Flight Engineer and Mission Specialist 2

Ellen Ochoa, 43 – Fourth space flight

Mission Specialist 3

Lee M. E. Morin, 49 – First space flight

Mission Specialist 4

Jerry L. Ross, 54 – Making a record seventh flight aboard the shuttle, the most of any astronaut in history

Mission Specialist 5

Steven L. Smith, 43 – Fourth space flight

Smith and Walheim will form one team of space walkers while

Ross and Morin will form a second spacewalking team.

Assisting with *Atlantis*' assembly work from aboard the ISS will be the current station residents, the Expedition 4 crew of Commander Yuri Onufrienko and Flight Engineers Dan Bursch and Carl Walz. The station crew has been aboard the complex since early December.

Atlantis will carry the first major external truss section for the station, a 43-foot long girder-like segment that will lay the foundation for an eventual cross-beam that will stretch more than 350 feet. Nine additional truss segments will be linked on future missions to the centerpiece segment carried by *Atlantis* to form the finished structure.

The finished truss will support almost an acre of solar panels and giant cooling radiators. Although the ISS already is a fully functional research complex with a single United States laboratory, the additional solar panels and radiators will provide the electricity and cooling necessary for Japanese and European laboratories to be attached to the station, as well as a future U.S. centrifuge laboratory.

The truss segment carried to the station by *Atlantis* also will include the first space railroad. Attached to the truss before launch will be a space railcar called the Mobile Transporter and a section of track that will span the length of the truss segment. The Mobile Transporter, when it is coupled with a base system for the station's Canadian robotic arm later this year, will allow the station's robotic arm to ride up and down the length of the football-field long finished truss. The rail system will allow the arm to be positioned wherever it may be needed along the truss for maintenance or assembly work in the future. ♦

Behind the scenes with . . . Dina Barclay, Lead EVA Officer for STS-110, 8A

By Melissa Davis

Q How long have you been the lead EVA (Extravehicular Activity, or space walk) Officer?

A I was assigned as the lead EVA officer for 8A around May of last year, although I have been working this flight on and off for about three years. I've been in the EVA MOD group for about six years after coming from the Training Division in MOD (Data Processing System and Navigation). I started learning the spacesuit and Shuttle airlock, certifying as a spacesuit instructor, and then moved on to learning the Shuttle exterior, payloads and the International Space Station exterior as an EVA task instructor. I then spent several months in Russia as an EVA liaison, and in May I was fortunate enough to be given this opportunity.

Q How long has the crew trained with you for this mission?

A The crew started training last year. The instructors on our team that really perform the detailed crew training are Michelle Hollinger, the lead EVA task instructor for the S0 element and ISS exterior, and Zeb Scoville, the lead spacesuit and airlock instructor.

Q What are some of the elements of their training?

A They have been hung from the ceiling, dunked under water in spacesuits, taken to vacuum in a JSC airlock and flown around the Space Station in virtual reality. They've also performed numerous tests involving the S0 element at KSC, they've spent time learning the intricacies of EVA tools and they've been riding on top of robotic arms at the Neutral Buoyancy Laboratory. Their training is varied to give them the best possible collective experience on the ground that can simulate working in space.

Q What are some challenges you will face with this mission?

A The biggest challenges involve the structural attach system of S0, and the time criticality of electrically mating the connectors before S0 gets too cold on the first EVA.

The S0 truss element is the central truss element, and it will be the mechanical 'anchor' to the US Lab for the entire truss at ISS assembly complete. There are four deployable, telescoping groups of struts (two of the groups are similar to a large camera tripod). These four strut groups form a rigid attach system between the truss and the Lab. They must be deployed via EVA, and the installation of the bolts that hold them in place is critical for further station assembly.

Also, like other ISS missions, the S0 truss element could get too cold after removal from the Shuttle payload bay and before heater power can be applied to it. As such, we must deploy trays of cables and mate several critical cables to get the heater power applied to it. If anything goes wrong with the as-planned trays or the cables, we have some backup cables we can deploy, but it all must be done on the first EVA.

Q What should readers keep in mind and be on the lookout for when following this particular mission?

A On the crew are two of the most experienced space walkers in the astronaut office, and they've been paired up with two well-trained and ready-to-fly new space walkers. These guys might make the EVAs look easy. Don't be fooled; completing a complicated mission like this isn't easy.

Q What interesting behind-the-scenes activity is going on with this mission that readers might be surprised to know?

A Two of the EV crew members are grandfathers. Guess which ones? Give up? Lee Morin and Jerry Ross.

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SPACE CENTER
Roundup

Our moment to shine:

JSC & World Space Congress 2002

World Space Congress 2002 Schedule

Space Ops 2002 Oct. 9-12	
Technical and Plenary Sessions Oct. 10-19	
The Space Generation Summit Oct. 11-19	Space Rocks! Oct. 18
Space Policy Summit Oct. 11-13	
The International Trade Exhibition Oct. 14-19	

SCHEDULE OF EVENTS

Also Happening at World Space Congress

The Space Generation Summit Oct. 11-19

The Space Generation Summit is a meeting of approximately 250 young international delegates for the purpose of refining and articulating the vision of young people on the future of utilization and exploration and exploration of space by humanity. For more information please visit www.unsogac.org/sgs/

Space Rocks! Oct. 18

The Space Generation events will culminate on Oct. 18 in Rice Stadium with a concert, Space Rocks!, featuring top entertainers and a full-day festival of games, rides, space hardware displays and space educational activities. Entertainers currently under consideration include Sting, The Dave Matthews Band, Destiny's Child, Santana, Blur and David Bowie.

The Space Ops 2002 Conference Oct. 9-12

Space Ops 2002 will bring space operations from around the world to center stage at the George R. Brown Convention Center. Space Ops 2002 is dedicated to exploring all aspects of space mission operations and ground data systems and to promoting and maintaining an international community of space operations experts.

Sponsored by NASA HQ Office of Space Flight, Space Ops will provide an excellent opportunity to foster continuous technical interchange on all aspects of space mission operations. This bi-annual international conference will feature papers presented in five technical tracks and exhibits showcasing the latest in space operations technology. A full social agenda is also planned. Space Ops 2002 is fully integrated with the World Space Congress and a single registration fee covers both events. Additional information about the conference, and instructions for submitting abstracts can be found at www.spaceops2002.org.

The Space Policy Summit Oct. 11-13

The Space Policy Summit, sponsored by Lockheed Martin Corp. and held in cooperation with James A. Baker III Institute for Public Policy and the Space Institute, will take place at Rice University. It will feature a group of invited representatives from around the world who will discuss increased opportunities for commercial space activities. A capstone event is also planned to commemorate half a century of international space achievement. Visit www.aiaa.org/spacepolicy/

The International Trade Exhibition Oct. 14-19

The International Trade Exhibition, at which JSC and NASA will have a presence, is designed to foster discussion on the revolution now taking place in space science and technology. It will feature product presentations, a model of the ISS and a Space Commercialization Pavilion with energy, remote sensing and telecommunications sub-areas.

Five hundred thousand square feet of space related exhibiting. Thirteen thousand expected attendees from around the world. Three hundred and forty five technical sessions, centered around seven main space themes.

It's World Space Congress 2002 coming to Houston this October.

It only happens once every 10 years and you don't want to miss it.

"World Space Congress 2002 provides NASA and Johnson Space Center with a unique opportunity to share, with an international audience, the excitement and energy that our workforce applies to human space flight," said Tom Cremins, Special Assistant to the Director of JSC.

"From policy to technical papers, this year's gathering holds the promise of a truly international forum on space exploration and related issues. We at JSC are privileged to be at the center of this intersection of ideas and cultures."

As the leader in space exploration and human space flight, JSC will play a heightened role in the conference as a supporting sponsor, offering numerous presentations, expert speakers and one-of-a-kind comprehensive exhibitory.

"We are excited about the opportunities WSC provides JSC, to meet a myriad of people and organizations and for us to 'show and tell' about our programs and our people," said Dan Carpenter, Director of Public Affairs. "We will share more information about these opportunities as we get closer to the event."

WSC, expected to draw more than 13,000 visitors from all over the world, is providing a venue for engineers and scientists to share in the latest research and technologies. It also is serving as a milieu for non-traditional space industries to explore the many applications and innovations of space.

"World Space Congress 2002 provides NASA and Johnson Space Center with a unique opportunity to share, with an international audience, the excitement and energy that our workforce applies to human space flight."

Tom Cremins
Special Assistant to the Director of JSC

Included in the topics for discussion are legal and policy factors, as well as space education and history. In addition to providing a platform for creating a common vision for the space community, the Congress is also focused on fostering a vision of space-based applications to benefit humanity.

"With a very diverse, global audience, we have a chance to showcase the accomplishments of ongoing human space flight programs and tout the potential benefits of the International Space Station in the exhibits we will highlight at this international event," said Louis Parker, JSC exhibit manager.

An Implementation Team has been meeting weekly to ensure JSC's technical presence is supported with various out-

reach activities, as well as educational programs, public affairs and media support and business networking highlighting our Technology Transfer Office.

"The World Space Congress provides an opportune time to demonstrate NASA's immeasurable importance of space exploration and connect its value to the daily lives of the public," said Charlene Gilbert of the Technology Transfer office.

The overarching theme of the Congress is "The New Face of Space." It embodies the objective of the event to promote the expansion of the space community into new arenas. Seven themes are being highlighted during the WSC designed to bring together non-traditional space industries that can benefit from space age technology.

Fueled by the same spirit of international cooperation that made the first World Space Congress so successful, The World Space Congress 2002 will

serve as a catalyst to explore new possibilities in space, expand our knowledge of the universe, strengthen the global economy and improve the quality of life on Earth. ♦

"Space Rocks! is the first event of its kind in history. It is an unprecedented opportunity for the space world to communicate two messages to a sold-out stadium of 70,000 diverse young concert goers as well as millions of TV viewers around the world: Space is at the forefront of our culture, and Space benefits humankind and improves the human condition."

Kelly Snook
Global Co-Chair of the Space Generation Advisory Council
and Executive Director of Space Rocks!

About WSC 2002

The World Space Congress 2002 is the second joint congress of the Committee on Space Research (COSPAR) and International Astronautical Federation (IAF), with its associates the International Academy of Astronautics (IAA) and the International Institute of Space Law (IISL). The Congress will be hosted by the American Institute of Aeronautics and Astronautics (AIAA) under the auspices of the United States National Academy of Sciences (NAS).

The first World Space Congress, held in Washington, D.C. in 1992, was the largest gathering of space professionals, with more than 10,000 scientists, engineers, business executives, government officials and academics from more than 70 countries attending. World Space Congress 2002 is expected to surpass its predecessor in both scope and content making it the largest space event ever held.

WSC Web site
www.aiaa.org/wsc2002

JSC Web site
www.jsc.nasa.gov/wsc

Participating in World Space Congress

There are many ways to take part in World Space Congress 2002:

General attendee
Volunteers
Other WSC-related volunteers
Speakers/Presenters
Official NASA Attendee

For details, please visit the Web site:
www.jsc.nasa.gov/wsc

There are 345 Technical Sessions, plus 16 Plenary Sessions centered around 7 main themes.

EVENT THEMES

Plenary Events

- ◆ Plenary Event: Life Science – Science in Space and Health on Earth
- ◆ Plenary Event: A Vision of the Next 25 Years of Scientific Investigations
- ◆ Plenary Event: New Technologies for Space Applications, joint
- ◆ Plenary Event: Space Transportation – the enabling capability for all space missions
- ◆ Plenary Event: Humans Beyond Earth Orbit
- ◆ Plenary Event: The International Space Station – A Key to the Future
- ◆ Plenary Event: Space as a Business. Special Event: An Integrated Approach to Monitoring Earth
- ◆ Plenary Event: A Vision of the Next 25 Years of Scientific Investigations
- ◆ Plenary Event: Space Activity: An Engine for Human Development
- ◆ Plenary Event: Futuristic Projections of Space Exploration and Applications

Science

- ◆ Life Sciences
- ◆ Micro gravity Sciences and Processes

Technology

- ◆ Astrodynamics
- ◆ Safety, Rescue and Quality
- ◆ Materials and Structures
- ◆ Nano-Materials for Space Applications

Infrastructure

- ◆ Space Power
- ◆ Space Propulsion
- ◆ Space Systems
- ◆ Space Transportation

Missions and Exploration

- ◆ Space and Natural Disaster Reduction
- ◆ Satellite Communications
- ◆ Space Exploration
- ◆ Space Stations
- ◆ Interstellar Space Exploration
- ◆ EVA and Space Suit
- ◆ Symposium on Small Satellite Missions
- ◆ 3rd UN/IAA Workshop on Small Satellites at the Service of Developing Countries
- ◆ Symposium on Human Exploration of Moon & Mars

Business & Applications

- ◆ Earth Observation
- ◆ Economics and Commercialization of Space Activities

Legal and Policy Factors

- ◆ Space Policy and Plans
- ◆ Space Activity and Society
- ◆ Colloquium on Law of Outer Space

Education and History

- ◆ Space and Education
- ◆ Student Conference
- ◆ History of Astronautics
- ◆ Multilingual Astronautical Terminology

* Note: Many of the initial deadlines for abstracts have been extended. Please visit www.jsc.nasa.gov/WSC for current deadlines, or contact Sharon Conover at x48158.

WSTF employees, high school students spend weekend on Mars

Sixty-five students and four educators spent a weekend learning more about the red planet when they attended the Third Annual Mars Settlement Design Competition. The event was sponsored by Johnson Space Center and White Sands Test Facility (WSTF).

In the Mars Settlement Design Competition, students write and present a proposal for a settlement on Mars that will accommodate more than 14,000 people. Within this framework, the students learn how to work in teams, meet company deadlines and consider cost and budget.

The students worked throughout the morning and midnight hours preparing a proposal that would answer the criteria set forth by Anita Gale and Dick Edwards – Boeing systems engineers and cofounders of the Mars Settlement Design Competitions. The teams then presented their settlement design proposals on Sunday morning to a panel of industry judges. Each proposal was limited to 50 pages and a 30-minute presentation.

Opening ceremonies keynote speaker NASA astronaut Bonnie Dunbar, Ph. D., and spotlight speaker Brian Derkowski, JSC Advanced Development Office, enlightened parents, students and educators about the benefits of NASA exploration and programs on Mars.

Gale and Edwards also spoke about the benefits of the competition as related to the student’s future in creating a successful, collaborative workplace.

At the event, Science Advisors (SciAds) were in a commons area, while the judging of the proposals occurred. Vacuum, micro gravity and rocketry were the SciAd topics presented to students and educators.

One of the interesting questions asked to participants at the Vacuum table was: Can boiling water reach freezing temperatures? The demonstration shows that the answer is yes. As the atmosphere (within the bell jar dome) is reduced to below the vapor pressure, the water boils and releases heat. As heat is released, the water cools. As the pressure approaches vacuum, this cooling pattern continues until the water freezes.

First-time CEO Erin Edgerly (NASA/WSTF Co-op) spearheaded the winning team. “The kids were really great. If I had known about this competition in high school, I would have wanted to participate,” Edgerly said. “As it was, I enjoyed participating in the competition as a CEO.”

Participant Kristin Bishop told the audience at the closing ceremonies that the event was “Awesome! This is my third competition, and I can’t express how wonderful this experience is.”

Gale echoes Bishop’s comment. “I am often thrilled by the student’s reaction to the competition. They feel that the competition has changed their lives.”

Gale isn’t alone in her thinking. New Mexico High School Educator Mark Bono agreed when he wrote to Pleddie Baker, Mars Settlement Design Coordinator. “Thank you for the opportunity you gave my kids this weekend. They are still on adrenaline highs and organizing a request for proposal for the international competition. I know this will be an annual event for my students. The fact that you do all of this work for these kids is not unappreciated. This is great advertisement for the NASA space program.”

This year’s competition was indeed a success. “We had a group of outstanding and hard-working students, as well as some very dedicated teacher chaperones,” Baker said.

“The students’ proposals were excellent, and it was hard for our eminently qualified judges to pick a winning team. Personally, I believe that when you participate in an experience like this, every student is a winner.”

Baker went on to thank all the hard-working WSTF volunteers, NASA JSC, Honeywell and local businesses that made the event possible.

“At each Mars Settlement Design Competition, it has become evident to me that the

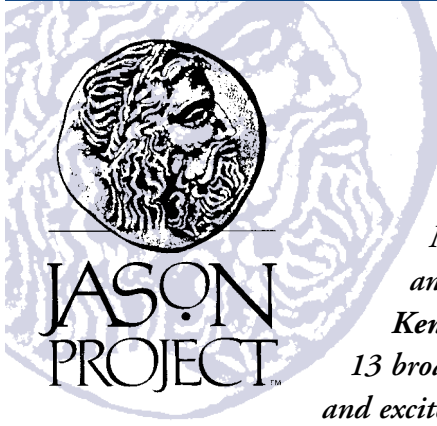


Mars Settlement Design Competition participants design their team’s settlement by choosing the location wisely.

youth of our nation are bright, eager and committed to science and engineering,” said Hallock, the event co-coordinator.
“The participants apply skills from all corners of academia towards the goal of one day setting foot on Mars. Through this one event, I believe that I have spoken with the astronaut who will set foot on Mars. It is just a matter of time.” ♦

Mars Settlement Design Competition Participants	Committee members Pleddie Baker Mike Hallock Cheerie Patneaude Lurlene Ford Steve McDougale
	Librarians Vonda Litzenberg Joan Von Wolff
	Logistics and registration Denise Barrett Gail Bennett Holger and Cecilia Fischer Peggy Kiser Steve McDougale Linda Green Lurlene and Lindy Ford Asher and Rechelle Lieberman Tracy Gonzales Lindy and Lurlene Ford Larry Schuyler Cheerie Patneaude Mike and Julie Hallock Richard Von Wolff Tom Quayle Eliazar Obregon Patsy Segura Susan Staley
	Technical experts Jim Hansen Richard Horst James Nunez Lou Barrera Bob Kowalski Brian Ross John Anderson Paul Spencer
	CEOs Dave Loyd Case Van Dyke Erin Edgerly Lou Barrera Deb Chowning Science Advisors Bill Curtis Denzil Burnam Aaron Paz Mark McClure Asher and Rechelle Lieberman Chase Curtis
	Judges Bonnie Dunbar, Ph.D., NASA Astronaut Brian Derkowski, JSC’s Advanced Development Office Anita Gale and Dick Edwards, cofounders Joe Vigil, Los Alamos National Laboratories Patricia Hynes, New Mexico Space Grant Consortium Steve Sanchez, New Mexico State Department of Education Young Ho Park, New Mexico State University, Department of Engineering Robert Quintana, Technology Teacher, Vista Middle School Barry Plante, Chief, NASA Engineering Office, WSTF

JASON Project takes students to Alaska



This year the JASON Project expedition lasted from Jan. 27 through Feb. 9, with broadcasts running in Space Center Houston's Mission Status Theater Jan. 28-30 and Feb. 6 and 7. Roundup reporter Kendra Ceule sat in on one of the 13 broadcasts to provide a look at the fun and excitement of the JASON project.

"Three! Two! One! JASON 13!"

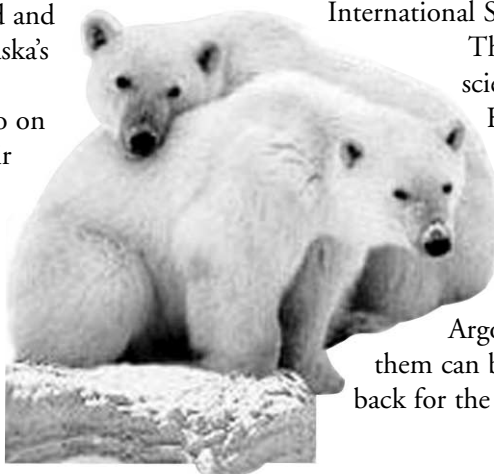
Like a belated New Year's party, the Mission Status Theater at Space Center Houston erupts in applause and cheers. More than 200 students have packed the theater, and hundreds more will come for other shows. This is no boring science field trip – this is JASON.

The JASON Project encourages kids to study science and technology by holding annual "expeditions" – two-week trips for the study of Earth's environments. A handful of students are selected every year to go on these expeditions, where they will work with top scientists to learn about Earth's life systems.

Past expeditions have allowed these students – called Argonauts – to study volcanoes in Hawaii, geysers and glaciers in Iceland and rainforests in Belize, just to name a few. This year's trip to Alaska's Seward and Portage marks the 13th expedition.

The students in the Mission Status Theater didn't get to go on this year's expedition to Alaska, but that hasn't dampened their enthusiasm. They've been studying the state's flora and fauna using JASON curriculum materials all year, and this is their payoff: A trip to Space Center Houston for a live satellite broadcast from the actual Argonauts and scientists.

Nearly 2,000 students from 34 schools in the Houston area will participate in one or more of the broadcasts. Since the broadcasts are live, each one is different.



In Alaska, a sea lion named Sugar waddles up to the camera for an unplanned close-up. The students laugh, along with the hundreds of students elsewhere in the nation who are also watching. There are dozens of broadcast sites nationally that allow students to interact with the expedition.

Johnson Space Center's Teague Auditorium had been a broadcast site since 1993, but this year it was moved to Space Center Houston due to increased security at JSC.

Education outreach coordinator Debbie Herrin doesn't mind the location change. She acts as a master of ceremonies for these interactive broadcasts, and says she likes the exciting atmosphere of Space Center Houston.

"OK, everybody clap if you think the answer is B!" Herrin says, and pockets of applause erupt. The students have just answered a multiple-choice quiz question, and their response is sent electronically to the Alaska team.

"Looks like seven broadcast sites got that one right! Way to go!" says Dr. Bob Ballard, live from Seward. Ballard, oceanographer and founder of JASON, is a personal friend of astronaut Bill Shepherd, who commanded Expedition 1.

But JSC's ties to the JASON Project don't end there: the eleventh JASON expedition, "Going to Extremes," was held at the Center in March 2000. Argonauts met astronauts, scientists and engineers, and learned about how humans protect their bodies while exploring the extremes of space. The students also set up an experiment that is now being performed on the International Space Station.

The Alaska broadcast is wrapping up; the Argonauts and scientists begin signing off. The students at Space Center Houston applaud one last time and file out of the theater. They're all smiles, but they'll take with them more than a fun memory: They leave more interested in science and more enthusiastic about exploring the world around them.

JASON may even have inspired these wannabe-Argonauts to become astronauts one day. But for now, many of them can be heard making a more immediate request: "Can we come back for the next JASON broadcast?" ♦

More information about the JASON Project...

- * Dr. Robert Ballard founded the JASON Foundation for Education in 1989. Shortly after discovering the submerged wreckage of the Titanic, Dr. Ballard realized the enormous potential impact of providing students with meaningful exposure to practicing scientists and scientific discovery.
- * With the assistance of partners from the scientific, government, private, educational and industrial community, Dr. Ballard pioneered the creation of telecommunication centers across the country and the dream to bring students along on his expeditions became a reality.
- * Today, millions of students and teachers are exposed to the JASON Project. Each year JASON explores a different part of planet Earth in search of answers to the questions:
 - What are nature's dynamic systems?
 - How do these systems affect life?
 - What technologies do we use to study these systems and why?
- * The JASON Project is an interdisciplinary program based on the National Science and Geography Standards. It integrates video programming, satellite transmissions, classroom activities and instruction, and extensive online opportunities to expose students to real science and exploration.
- * Through a hands-on, inquiry driven learning experience that includes a live two-week satellite expedition, JASON inspires teachers to try new teaching techniques and effectively engages students in active learning.
- * The JASON Project is an exemplary multimedia, science education project that promises to spark the imagination of students and change the way teachers are teaching.
- * The Mission of The JASON Foundation for Education is to "inspire in students a lifelong passion to pursue learning in science, math and technology through exploration and discovery."
- * To learn more about the JASON Project, please visit www.jasonproject.org

Profiles



Alice Lee

Time at JSC: 14 years

Organization: Technology Division, SR&QA

Position title: Chief Technologist for SR&QA and Assistant Chief of the Technology Division

Education: Master's degree in Computer Science, Rice University
Advanced Study, MIT (NASA Fellowship, 1994)

Place of birth: Taiwan

Hobbies: Chinese ink and brush painting, dancing, writing and sewing

What does Women s History Month mean to you?
The theme of this year's National Women's History Month is particularly meaningful to me as a first generation immigrant. The theme is "Women Sustaining the American Spirit." It showcases the diverse and interlocking stories of women who have created and affirmed the American spirit. This theme will help deliver the message of who American women are and what they have accomplished. Those women serve as role models to me.

Favorite words of wisdom: Those who sow in tears shall reap in joy. – Psalms 126:5

Diana T. Norman



Time at JSC: 11 years

Organization: Previously in Space & Life Sciences
Currently in External Relations Office

Position title: External Relations Specialist

Education: Associate's Degree in Office Management

Place of birth: Houston, Texas

Hobbies: Shopping, Crafts and Walking

What does Women s History Month mean to you? To take a moment to reflect on the wonderful and exciting opportunities that women with courage and foresight gave to women of our generation.

Favorite words of wisdom: Keep smiling; tomorrow will be another day.

Carla M. Bell



Time at JSC: 22 years

Organization: Center Operations Directorate

Position title: Supply Management Specialist

Education: Dickinson High School
College of the Mainland

Place of birth: Galveston, Texas

Hobbies: Reading

What does Women s History Month mean to you? To me, Women's History Month means recognizing the past, present and future achievements of women who have contributed to the making of this great country and of the world. Each woman has helped (in some way) to mold and shape history, so congratulations to each of us.

Favorite words of wisdom: I can do all things through Christ which strengtheneth me.– Philipians 4:13

Donna Winchell



Time at JSC: 5 years

Organization: CFO, FMD, Financial Services Branch

Position title: Accountant, Group Lead, NASA CTO International and JSC Travel and Internal Controls

Education: Bachelor's degree, Albany State University
MBA, Florida Institute of Technology

Place of birth: Dallas, Texas

Hobbies: Reading, scuba diving, gardening and golfing

What does Women s History Month mean to you? Recognizing and celebrating the achievements of women, then learning and building on these accomplishments to improve our quality of life.

Favorite words of wisdom: Nothing can stop the person with the right mental attitude from achieving their goal; nothing on the earth can help the person with the wrong mental attitude.

Erica Vandersand



Time at JSC: 7 years

Organization: AH3/Human Resources Development Branch

Position title: HR Development Representative

Education: B.S. in Psychology, Tulane University
M.A. in Industrial/Organizational Psychology, Rice University

Place of birth: New Orleans, Louisiana

Hobbies: Singing and computer adventure games

What does Women s History Month mean to you? I'm so busy being a woman of the 21st Century, I haven't had time to think about it before! Reflecting now on the role that women – historical figures or not – have played in our existence leads me to compare my life to those that came before me. I work in a time when I've never had to deal with the obstacles that the professional women before me faced – the glass ceiling has moved up a couple of floors due to their efforts. I live and work in a time when I get to choose between the equally respectable and valued options of being a "stay-at-home mom" or a "working mom." I wonder what the legacy of the women of the 21st Century will be?

Favorite words of wisdom: The one constant in life is change.

M A R C H
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W o m e n ' s
H i s t o r y
M o n t h

SPACE CENTER Roundup

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Managing EditorMelissa Davis. melissa.davis1@jsc.nasa.gov

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